ELSEVIER

Physiology & Behavior, Vol. 66, No. 5, pp. 901–909, 1999
© 1999 Elsevier Science Inc.
Printed in the USA. All rights reserved
0031-9384/99 $–see front matter

CONTENTS
VOLUME 66, 1999

CONTENTS VOLUME 66 NUMBER 1 1999

Announcement

New Editor–in–Chief 1

Articles

Development of Play Behavior in Neonatally Undernourished Rats
LORANCA, A., C. TORRERO AND M. SALAS 3

Effects of Ovarian Hormones and Environment on Radial Maze and Water Maze Performance of Female Rats
DANIEL, J. M., S. L. ROBERTS AND G. P. DOHANICH 11

Social Contact Synchronizes Free-Running Activity Rhythms of Diurnal Palm Squirrels
RAJARATNAM, S. M. W. AND J. R. REDMAN 21

Anion Size of Sodium Salts and Simple Taste Reaction Times
DELWICHE, J. F., B. P. HALPERN AND J. A. DESIMONE 27

Comparison of the Parental Behavior of Pair-Bonded Female and Male Prairie Voles (*Microtus ochrogaster*)
LONSTEIN, J. S. AND G. J. DE VRIES 33

Respiratory Airflow Pattern at the Rat's Snout and an Hypothesis Regarding Its Role in Olfaction
WILSON, D. A. AND R. M. SULLIVAN 41

Macronutrient Self-Selection Through Demand-Feeders in Rainbow Trout
SÁNCHEZ–VÁZQUEZ, F. J., T. YAMAMOTO, T. AKIYAMA, J. A. MADRID AND M. TABATA 45

Characterization of Cardiorespiratory Responses to Electrical Stimulation of the Globus Pallidus in Cat
ÁNGYÁN, L. AND Z. ÁNGYÁN 53

Castration Does Not Inhibit Aggressive Behavior in Adult Male Prairie Voles (*Microtus ochrogaster*)
DEMAS, G. E., C. A. MOFFATT, D. L. DRAZEN AND R. J. NELSON 59

Imagery Quality Estimated by Autonomic Response Is Correlated to Sporting Performance Enhancement
ROURE, R., C. COLLET, C. DESCHAUMES-MOLINARO, G. DELHOMME, A. DITTMAR AND E. VERNET-MAURY 63

Effects of Vomeronasal Organ Removal on Individual Odor Discrimination, Sex-Odor Preference, and Scent Marking by Female Hamsters
PETRULIS, A., M. PENG AND R. E. JOHNSTON 73

The Neurosteroids DHEA and DHEAS May Influence Cognitive Performance by Altering Affective State
FRYE, C. A. AND E. H. LACEY 85

Posterodorsal Amygdaloid Lesions and NaCl Intake: A Failure to Replicate Enhanced Intake
KING, B. M. AND S. G. STINES 93

Behavioral Responses to Ovariectomy and Chronic Anabolic Steroid Treatment in Female Cynomolgus Macaques
STAVISKY, R. C., T. C. REGISTER, S. L. WATSON, D. S. WEAVER AND J. R. KAPLAN 95

Effects of Short- and Long-Term Wheel Deprivation on Running
MUELLER, D. T., G. HERMAN AND R. EIKELBOOM 101

Time Course of Burn to Repeated Applications of Capsaicin
BALABAN, C. D., D. H. McBURNEY AND M. STOULIS 109

Photoperiod Modulates Torpor and Food Intake in Siberian Hamsters Challenged With Metabolic Inhibitors
STAMPER, J. L., J. DARK AND I. ZUCKER 113

Electrical Stimulation of the Amygdala Increases the Amplitude of Elicited Ponto-geniculo-occipital Waves
DEBOER, T., R. J. ROSS, A. R. MORRISON AND L. D. SANFORD 119

Lack of Sex Differences in Anxiety Behaviors During Precipitated Benzodiazepine Withdrawal in Rats
STOCK, H., K. FORD, R. BISCARDI AND M. A. WILSON 125

Effect of Dietary Macronutrients on Food Intake, Body Weight, and Tail Width in the Marsupial *S. crassicaudata*
NG, K.-L., R. VOZZO, P. J. HOPE, I. M. CHAPMAN, J. E. MORLEY, M. HOROWITZ AND G. A. WITTERT 131

Effects of Fasting on the Circadian Body Temperature Rhythm of Japanese Quail
UNDERWOOD, H., C. T. STEELE AND B. ZIVKOVIC 137

Analgesia in Selectively Bred Mice Exposed to Cold in Helium/Oxygen Atmosphere
SADOWSKI, B. AND M. KONARZEWSKI 145

Pheromones and Novel Male-Induced Pregnancy Disruptions in Mice: Exposure to Conspecifics Is Necessary for Urine Alone to Induce an Effect
DE CATANZARO, D., C. MUIR, C. SULLIVAN AND A. BOISSY 153

Brief Communications

Visceral Protein and Hematological Status of Women With Bulimia Nervosa and Depressed Controls
GENDALL, K. A., C. M. BULIK AND P. R. JOYCE 159

Erratum

Brain Insulin Response to Feeding in the Rat Is Both Macronutrient and Area Specific
GEROZISSIS, K., C. ROUCH, S. NICOLAÏDIS AND M. OROSCO 165

CONTENTS VOLUME 66 NUMBER 2 1999

Special Section

Workshop on Taste and Smell in the Elderly: An Overview
FINKELSTEIN, J. A. AND S. S. SCHIFFMAN 173

Loss of Olfactory Function in Dementing Disease
MURPHY, C. 177

Effect of Medications on Taste: Example of Amitriptyline HCl
SCHIFFMAN, S. S., J. ZERVAKIS, M. S. SUGGS, E. SHAIO AND E. A. SATTELY-MILLER 183

Do Chemosensory Changes Influence Food Intake in the Elderly?
ROLLS, B. J. 193

Food Aversion Learning: A Risk Factor for Nutritional Problems in the Elderly?
BERNSTEIN, I. L. 199

Alterations of Chemosensory Function in End-Stage Liver Disease
BLOOMFELD, R. S., B. G. GRAHAM, S. S. SCHIFFMAN AND P. G. KILLENBERG 203

The Influence of Aging on Oral Health and Consequences for Taste and Smell
SHIP, J. A. 209

Articles

Inhibitory Effects of Electroacupuncture on Stress Responses Evoked by Tooth-Pulp Stimulation in Rats
HAN, S.-H., S.-H. YOON, Y.-W. CHO, C.-J. KIM AND B.-I. MIN 217

Inheritance of Premeal Stomach Content Influences on Food Intake in Free Living Humans
DE CASTRO, J. M. 223

Chronic Stress in Dogs Subjected to Social and Spatial Restriction. I. Behavioral Responses
BEERDA, B., M. B. H. SCHILDER, J. A. R. A. M. VAN HOOFF, H. W. DE VRIES AND J. A. MOL 233

Chronic Stress in Dogs Subjected to Social and Spatial Restriction. II. Hormonal and Immunological Responses
BEERDA, B., M. B. H. SCHILDER, W. BERNADINA, J. A. R. A. M. VAN HOOFF, H. W. DE VRIES AND J. A. MOL 243

Role of the Ventromedial Hypothalamus in Prolactin-Induced Hyperphagia in Ring Doves
BUNTIN, J. D., R. M. HNASKO AND P. H. ZUZICK 255

Effect of Dopamine Blockers on Cerebral Ischemia-Induced Hyperactivity in Gerbils
ARAKI, H., N. HINO, Y. KARASAWA, H. KAWASAKI AND Y. GOMITA 263

Blood Pressure and Heart Rate Rhythmicity: Differential Effects of Late Pregnancy
STOYNEV, A. G., P. D. PENEV, A. V. PEENVA, G. CORNELISSEN, F. HALBERG AND O. C. IKONOMOV 269

Interactive Effects of Psychosocial Stressors and Gender on Mouse Mammary Tumor Growth
KERR, L. R., D. A. WILKINSON, J. T. EMERMAN AND J. WEINBERG 277

The Orosensory Recognition of Long-Chain Fatty Acids in Rats
TSURUTA, M., T. KAWADA, T. FUKUWATARI AND T. FUSHIKI 285

Reduction in Peripheral Inflammation by Changes in Attention
GENTLE, M. J. AND V. L. TILSTON 289

Periodic Maternal Deprivation Induces Gender-Dependent Alterations in Behavioral and Neuroendocrine Responses to Emotional Stress in Adult Rats
WIGGER, A. AND I. D. NEUMANN 293

Development of Vasomotor Control in Lean (+/?) and Genetically Obese (*fa/fa*) Rat Pups
DÖRING, H., H. SANN AND I. SCHMIDT 303

Plasma Glucagon, Glucose, Insulin, and Motilin in Rats Anticipating Daily Meals
DAVIDSON, A. J. AND F. K. STEPHAN 309

Gustatory Changes Associated With the Menstrual Cycle
KUGA, M., M. IKEDA AND K. SUZUKI 317

Environmental Lighting Has a Selective Influence on Ethanol Intake in Rats
GOODWIN, F. L. W., S. AMIR AND Z. AMIT 323

Enhanced Food-Anticipatory Circadian Rhythms in the Genetically Obese Zucker Rat
MISTLBERGER, R. E. AND E. G. MARCHANT 329

Behavioral and Neuroanatomical Consequences of Chronic Ethanol Intake and Withdrawal
LUKOYANOV, N. V., M. D. MADEIRA AND M. M. PAULA-BARBOSA 337

Beta-Adrenoceptor Blockade and Open-Field Behavior in Male Golden Hamsters
KORZ, V. AND R. GATTERMANN 347

A Rodent Model of Spontaneous Stereotypy: Initial Characterization of Developmental, Environmental, and Neurobiological Factors
POWELL, S. B., H. A. NEWMAN, J. F. PENDERGAST AND M. H. LEWIS 355

Peripheral Heat Loss: A Predictor of the Hypothermic Response to Melatonin Administration in Young and Older Women
GILBERT, S. S., C. J. VAN DEN HEUVEL, D. J. KENNAWAY AND D. DAWSON 365

Brief Communications

Reduced Femoral Geometry But Normal Biomechanics in the Dorsomedial Hypothalamic Nucleus-Lesioned Rat
KIDD, R. J., I. ZIV AND L. L. BERNARDIS 371

Effects of Sweetness and Energy in Drinks on Food Intake Following Exercise
KING, N. A., K. APPLETON, P. J. ROGERS AND J. E. BLUNDELL 375

CONTENTS VOLUME 66 NUMBER 3 1999

Articles

Differential Reinforcing and Satiating Effects of Intragastric Fat and Carbohydrate Infusions in Rats
LUCAS, F. AND A. SCLAFANI 381

Flavor Preferences Conditioned by High-Fat versus High-Carbohydrate Diets Vary as a Function of Session Length
LUCAS, F. AND A. SCLAFANI 389

Evoked Potentials Elicited by Natural Stimuli in the Brain of Unanesthetized Crayfish
HERNÁNDEZ-FALCÓN, J., J. SERRATO AND F. RAMÓN 397

The Response of Crying Newborns to Sucrose: Is It a "Sweetness" Effect?
BARR, R. G., M. S. PANTEL, S. N. YOUNG, J. H. WRIGHT, L. A. HENDRICKS AND R. GRAVEL 409

Effects of Bile Duct Ligation and Captopril on Salt Appetite and Renin–Aldosterone Axis in Rats
LANE, J. R., E. M. STARBUCK, A. K. JOHNSON AND D. A. FITTS 419

The Mother Rat's Vomeronasal Organ Is Involved in Detection of Dodecyl Propionate, the Pup's Preputial Gland Pheromone
BROUETTE-LAHLOU, I., F. GODINOT AND E. VERNET-MAURY 427

BXSB Mice Can Learn Complex Visual Pattern Discriminations
HYDE, L. A. AND V. H. DENENBERG 437

GM1 Produces Attenuation of Short-Term Memory Deficits in Hebb–Williams Maze Performance After Unilateral Entorhinal Cortex Lesions
GLASIER, M. M., L. S. JANIS, M. I. GONCALVES AND D. G. STEIN 441

Factors Influencing Metabolic Rate in Naked Mole-Rats (*Heterocephalus glaber*)
GOLDMAN, B. D., S. L. GOLDMAN, T. LANZ, A. MAGAURIN AND A. MAURICE 447

Nonphotic Entrainment of Activity and Temperature Rhythms in Anophthalmic Mice
LAEMLE, L. K. AND J. E. OTTENWELLER 461

Lipectomy, Body Weight, and Body Weight Set Point in Rats
MICHEL, C. AND M. CABANAC 473

Age-Related Changes in Grooming Behavior and Motor Activity in Female Rats
SCIMONELLI, T., M. MARUCCO AND M. E. CELIS 481

Slow-Wave Sleep and Waking Cognitive Performance Among Older Adults With and Without Insomnia Complaints
CRENSHAW, M. C. AND J. D. EDINGER 485

Deficit in the Water-Maze After Lesions in the Anteromedial Extrastriate Cortex in Rats
ESPINOZA, S., T. PINTO-HAMUY, C. PASSIG, F. CARREÑO, F. MARCHANT AND C. URZÚA 493

Behavioral Responses to Aliphatic Aldehydes Can Be Predicted From Known Electrophysiological Responses of Mitral Cells in the Olfactory Bulb
LINSTER, C. AND M. E. HASSELMO 497

Behavioural Anxiolytic Effects of Low-Dose Anabolic Androgenic Steroid Treatment in Rats
ÅGREN, G., I. THIBLIN, P. TIRASSA, T. LUNDEBERG AND C. STENFORS 503

Perceived Effects of Stress on Food Choice
OLIVER, G. AND J. WARDLE 511

Effect of the H_1-Histamine Receptor Agonist Betahistine on Drinking and Eating Behavior in Pygmy Goats
ROSSI, R., E. DEL PRETE AND E. SCHARRER 517

Neuroendocrine and Behavioral Effects of CRH Blockade and Stress in Male Rats
ALOISI, A. M., M. BIANCHI, C. LUPO, P. SACERDOTE, AND F. FARABOLLINI 523

Modulation of Taste Reactivity by Intestinal Distension in Rats
GYETVAI, B. AND G. BÁRDOS 529

Effects of Intracerebroventricularly Administered Leptin on Protein Selection in the Rat
AZAIN, M. J., T. WANG, M. G. HULSEY, H. QIAN, D. L. HARTZELL AND C. A. BAILE 537

A Microstructural Analysis of the Control of Water and Isotonic Saline Ingestion by Postingestional Stimulation
DAVIS, J. D. G. P. SMITH AND B. SINGH 543

CONTENTS VOLUME 66 NUMBER 4 1999

Articles

Group and Individual Gustatory Reaction Times and Piéron's Law
BONNET, C., M. C. ZAMORA, F. BURATTI AND M. GUIRAO 549

Lack of Influence of Hysterectomy on Meal Size and Meal Number in Fischer-344 Rats
VARMA, M., M. M. MEGUID, W. G. HAMMOND AND J. R. GLEASON 559

Influence of Age on Behavioural Response in the Light/Dark Paradigm
HASCOËT, M., M.-C. COLOMBEL AND M. BOURIN 567

Fetal Alcohol Exposure Blocks Full Masculinization of the Dorsolateral Nucleus in Rat Spinal Cord
WARD, I. L., R. D. ROMEO, J. H. DENNING AND O. B. WARD 571

Protective Effect of Acidic Fibroblast Growth Factor Against Ischemia-Induced Learning and Memory Deficits in Two Tasks in Gerbils
LI, A.-J., Y. OOMURA, K. SASAKI, K. SUZUKI AND T. HORI 577

Thermal Preference Behavior Following Clonidine, Norepinephrine, Isoproterenol, and Ephedrine
CARLISLE, H. J., T. S. FROST AND M. J. STOCK 585

Effects of Mating on c-*fos* Expression in the Brains of Male Macaques
MICHAEL, R. P., A. N. CLANCY AND D. ZUMPE 591

Temporal and Behavioral Patterning of Parturition in Rabbits and Rats
HUDSON, R., Y. CRUZ, R. A. LUCIO, J. NINOMIYA AND M. MARTÍNEZ-GÓMEZ 599

Daily Activity and Body Temperature Rhythms Do Not Change Simultaneously With Age in Laboratory Mice
WEINERT, D. AND J. WATERHOUSE 605

Endocrine and Psychophysiological Aspects of Human Adaptation to the Extreme
FARRANCE, S., P. CENNI, G. TUOZZI, M. CASAGRANDE, B. BARBARITO AND A. PERI 613

Differential Satiating Effects of Fats in the Small Intestine of Obesity-Resistant and Obesity-Prone Rats
GREENBERG, D., J. MCCAFFERY, J. Z. POTACK, G. A. BRAY AND D. A. YORK 621

Long-Term Behavioral Effects of Repetitive Pain in Neonatal Rat Pups
ANAND, K. J. S., V. COSKUN, K. V. THRIVIKRAMAN, C. B. NEMEROFF AND P. M. PLOTSKY 627

High-Frequency Ultrasonic Vocalizations Index Conditioned Pharmacological Reward in Rats
KNUTSON, B., J. BURGDORF AND J. PANKSEPP 639

Inhibition of Food Intake by CRF in Chickens
DENBOW, D. M., N. SNAPIR AND M. FURUSE 645

Age-Induced Cognitive Alterations in OF1 Mice
CARRIÉ I., M. DEBRAY, J.-M. BOURRE AND H. FRANCÈS 651

Control of Reproductive and Energetic Status by Environmental Cues in a Desert Rodent, Shaw's Jird
EL-BAKRY, H. A., W. M. ZAHRAN AND T. J. BARTNESS 657

Effects of Prenatal Morphine Exposure on Rat Heterotypical Sexual Behavior
VATHY, I. 667

Behavior of Adult and Aged Mice Before and After Central Injection of Interleukin-1β
NELSON, K. P., N. L. MARKS, J. R. R. HEYEN AND R. W. JOHNSON 673

Palatability Affects Satiation But Not Satiety
DE GRAAF, C., L. S. DE JONG AND A. C. LAMBERS 681

A Demonstration of Classical Conditioning of the Human Eyeblink to an Olfactory Stimulus
MOORE, A. B. AND C. MURPHY 689

Scent-Marking and Cortisol Response in the Small-Eared Bushbaby (*Otolemur garnettii*)
WATSON, S. L., J. P. WARD, K. B. DAVIS AND R. C. STAVISKY 695

Generalization Between Binary Odor Mixtures and Their Components in the Rat
LINSTER, C. AND B. H. SMITH 701

2-Deoxy-D-glucose and Mercaptoacetate Induce Different Patterns of Macronutrient Ingestion
RITTER, S., J. B. RITTER AND L. CROMER 709

Brief Communication

The Tachykinin NK-1 Receptor Antagonist, RP-67580, Infused Into the Ventral Tegmental Area Prevents Stress-Induced Analgesia in the Formalin Test
ALTIER, N. AND J. STEWART 717

Articles

Gait Analysis in the Mouse
CLARKE, K. A. AND J. STILL 723

Energy Consumption of Termite Colonies of *Nasutitermes ephratae* (Isoptera: Termitidae)
MURADIAN, R., S. ISSA AND K. JAFFE 731

Ketaset–Rompun Extends the Temporal Gradient for Hypothermia-Induced Retrograde Amnesia
METZGER, M. N. AND D. C. RICCIO 737

The Generalizability of Capsaicin Sensitization and Desensitization
PRESCOTT, J. 741

Do Long-Term Glucocorticoid Treatments Induce Behavioral Rhythm Disturbances in Rats?
ENDO, Y. 751

Septal Vasopressin Modulates Motility and Passive Avoidance in Pinealectomized Rats
APPENRODT, E. AND H. SCHWARZBERG 757

Effects of Naloxone on the Acquisition and Expression of Appetitive and Consummatory Sexual Behavior in Male Japanese Quail
RITERS, L. V., P. ABSIL AND J. BALTHAZART 763

Temporal Differences in the Responses of the Pituitary Adrenocortical Axis, the Sympathoadrenomedullar Axis, Heart Rate, and Behaviour to a Daily Repeated Stressor in Domestic Pigs
SCHRADER, L. AND J. LADEWIG 775

A Therapeutic Role for Melatonin Antagonism in Experimental Models of Parkinson's Disease
WILLIS, G. L. AND S. M. ARMSTRONG 785

Further Experiments on the Relationship Between the Period of Circadian Rhythms and Locomotor Activity Levels in Hamsters
MROSOVSKY, N. 797

VHM Lesions Reduce Excessive Running Under the Activity–Stress Paradigm in the Rat
IWAMOTO, Y., M. NISHIHARA AND M. TAKAHASHI 803

Latency to Traverse a T-maze at 2 Days of Age and Later Adrenocortical Responses to an Acute Stessor in Domestic Chicks
MARIN, R. H. AND R. B. JONES 809

Fluoxetine-Maintained Obese Humans: Effects of Food Intake and Body Weight
WARD, A. S., S. D. COMER, M. HANEY, M. W. FISCHMAN AND R. W. FOLTIN 815

Persistent Neonatal Borna Disease Virus (BDV) Infection of the Brain Causes Chronic Emotional Abnormalities in Adult Rats
PLETNIKOV, M. V., S. A. RUBIN, G. J. SCHWARTZ, T. H. MORAN, T. J. SOBOTKA AND K. M. CARBONE 823

An Imbalance of Dietary Essential Fatty Acids Retards Behavioral Development in Mice
WAINWRIGHT, P. E., E. JALALI, L. M. MUTSAERS, R. BELL AND S. CVITKOVIC 833

Absolute and Relative Rewarding Properties of Fructose, Glucose, and Saccharin Mixtures as Reflected in Anticipatory Contrast
FLAHERTY, C. F. AND C. MITCHELL 841

Physiological Suppression of Sexual Function of Subordinate Males: A Subtle Form of Intrasexual Competition Among Male Sifakas (*Propithecus verreauxi*)?
KRAUS, C., M. HEISTERMANN AND P. M. KAPPELER 855

Hyperresponsiveness to Palatable and Aversive Taste Stimuli in Genetically Obese (Bombesin Receptor Subtype-3–Deficient) Mice
YAMADA, K., E. WADA, J. IMAKI, H. OHKI-HAMAZAKI AND K. WADA 863

Impaired Learning and Memory in OLETF Rats Without Cholecystokinin (CCK)-A Receptor
NOMOTO, S., M. MIYAKE, M. OHTA, A. FUNAKOSHI AND K. MIYASAKA 869

Sodium Intake and Reproduction in BALB/C Mice
McBURNIE, M. I., J. R. BLAIR-WEST, D. A. DENTON AND R. S. WEISINGER 873

Feeding Response to Neuropeptide Y-Related Compounds in Rats Treated With Y5 Receptor Antisense or Sense Phosphothio-oligodeoxynucleotide
FLYNN, M. C., N. P. TURRIN, C. R. PLATA-SALAMÁN AND
J. M. FFRENCH–MULLEN 881

Brain Norepinephrine Changes With Simulated Weightlessness and Relation to Exercise Training
KASTELLO, G. M. AND M. S. SOTHMANN 885

Brief Communication

Food Restriction Neither Improves Nor Exacerbates Reproduction in Obese Female Zucker Rats
MARÍN–BIVENS, C. L. AND D. H. OLSTER 893